

Roundup PowerMax and Diphenyl Ether Tank Mixes.

Trial ID: 10-DSO-MONTankmix Location: De Soto, IL

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: De Soto IL 62924 USA
 Trial Status: FINAL Initiation Date: 05-08-10

Objectives: Examine tankmixes of glyphosate with diphenyl ethers to assess glyphosate-resistant common waterhemp control.

Crop 1: GLXMA Soybean Variety: AG 4005 Description: RR
 Planting Method: SEEDED Planting Date: 05-08-10
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest Description: glyphosate-resistant waterhemp

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: NO-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2009

Field Prep./Maintenance: N 13 LB/A, P205 34 LB/A, K20 92 LB/A

% OM: 2.5 Texture: SILT LOAM
 pH: 6.8 Soil Name: OKAW
 CEC: 12 Fert. Level: P1 88 LB/A, K 207 LB/A

Application Description

	A	B
Application Date:	06-08-10	06-16-10
Time of Day:	10:30	10:00
Application Method:	Spray	Spray
Application Timing:	3-4"WH	7-10DA-A
Application Placement:	BROFOL	BROFOL
Applied By:	NVH	JRK
Air Temperature, Unit:	83 F	82 F
% Relative Humidity:	58	81
Wind Velocity, Unit:	4 MPH	1 MPH
Wind Direction:	S	NE
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	73 F	81 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	70	0

	A	B
Crop stage at application:	V3	V8-R1
Height Min, Max (inch):	6 8	20 26

Pest Stage At Each Application

	A	B
Application Date:	06-08-10	06-16-10
Weed Code:	AMATA	AMATA
Stage Majority (leaves):	6	8
Stage Min, Max:	4 12	1 14
Height Majority:	4 IN	4 IN
Height Min, Max:	1 6	0.5 8
Density, Unit:	40 FT2	5 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

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Pest Code										GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code										09-25-10	06-15-10	06-23-10	07-06-10	07-14-10
Rating Date										Yield	Injury	Injury	Injury	Injury
Rating Data Type										bu/A	Percent	Percent	Percent	Percent
Rating Unit											7 DA-A	15 DA-A	28 DA-A	36 DA-A
Rating Timing											-1 DA-B	7 DA-B	20 DA-B	28 DA-B
Trt-Eval Interval														
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	38	abc	0	f	0
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A				c	c
2	FLEXSTAR	1.88	EC	0.293	lb ai/a	20	fl oz/a	3-4"WH	A	36	bc	15	b	3
2	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			3	d	0
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	3-4"WH	A	33	c	25	a	4
3	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			4	cd	0
4	ULTRA BLAZER	2	EC	0.25	lb ai/a	16	fl oz/a	3-4"WH	A	41	ab	8	d	1
4	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			1	ef	0
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	39	abc	17	b	4
5	FLEXSTAR	1.88	EC	0.293	lb ai/a	20	fl oz/a	3-4"WH	A			4	d	0
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A				c	c
5	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A					
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	35	bc	24	a	7
6	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	3-4"WH	A			7	c	0
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A				c	c
6	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A					
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	36	bc	23	a	4
7	ULTRA BLAZER	2	EC	0.25	lb ai/a	16	fl oz/a	3-4"WH	A			4	cd	0
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A				c	c
7	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A					
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	39	abc	0	f	11
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			11	b	6
8	FLEXSTAR	1.88	EC	0.352	lb ai/a	24	fl oz/a	7-10DA-A	B				b	1
8	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	7-10DA-A	B					
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	39	abc	0	f	19
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			19	a	5
9	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	7-10DA-A	B				b	0
9	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	7-10DA-A	B					c
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	42	a	0	f	12
10	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			12	b	8
10	ULTRA BLAZER	2	EC	0.352	lb ai/a	22.5	fl oz/a	7-10DA-A	B				a	3
10	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	7-10DA-A	B					
11	FLEXSTAR	1.88	EC	0.293	lb ai/a	20	fl oz/a	3-4"WH	A	37	abc	12	c	3
11	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			3	de	0
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DA-A	B				c	0
11	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7-10DA-A	B					
12	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	3-4"WH	A	37	abc	25	a	10
12	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			10	b	0
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DA-A	B				c	0
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7-10DA-A	B					
13	ULTRA BLAZER	2	EC	0.25	lb ai/a	16	fl oz/a	3-4"WH	A	37	abc	7	de	3
13	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			3	de	0
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DA-A	B				c	0
13	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7-10DA-A	B					
14	FLEXSTAR GT	3.31	SL	1.55	lb ae/a	60	fl oz/a	3-4"WH	A	39	abc	6	e	0
14	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			0	f	0
15	FLEXSTAR GT	3.31	SL	1.85	lb ae/a	71.5	fl oz/a	3-4"WH	A	33	c	8	d	3
15	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			3	de	0
16	NONTREATED									34	c	0	f	0
LSD (P=.05)										6.2	2.6	2.4	0.9	0.7
Replicate F										4.152	0.262	0.779	0.522	1.000
Replicate Prob(F)										0.0256	0.7715	0.4679	0.5984	0.3798
Treatment F										1.516	114.674	38.185	71.164	9.600
Treatment Prob(F)										0.1616	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Roundup PowerMax and Diphenyl Ether Tank Mixes.

Trial ID: 10-DSO-MONTankmix Location: De Soto, IL

Pest Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code				
Rating Date	06-15-10	06-23-10	07-06-10	07-14-10
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Timing	7 DA-A	15 DA-A	28 DA-A	36 DA-A
Trt-Eval Interval	-1 DA-B	7 DA-B	20 DA-B	28 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	61	bc	60	d
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			38	d
2	FLEXSTAR	1.88	EC	0.293	lb ai/a	20	fl oz/a	3-4"WH	A	98	a	97	a
2	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			96	ab
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	3-4"WH	A	96	a	93	ab
3	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			77	c
4	ULTRA BLAZER	2	EC	0.25	lb ai/a	16	fl oz/a	3-4"WH	A	91	a	87	c
4	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			83	bc
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	98	a	97	a
5	FLEXSTAR	1.88	EC	0.293	lb ai/a	20	fl oz/a	3-4"WH	A			97	ab
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			96	ab
5	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A				
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	98	a	96	a
6	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	3-4"WH	A			91	abc
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			91	ab
6	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A				
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	97	a	96	a
7	ULTRA BLAZER	2	EC	0.25	lb ai/a	16	fl oz/a	3-4"WH	A			94	ab
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			94	ab
7	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A				
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	67	b	98	a
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			98	ab
8	FLEXSTAR	1.88	EC	0.352	lb ai/a	24	fl oz/a	7-10DA-A	B			97	a
8	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	7-10DA-A	B				
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	64	b	97	a
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			93	ab
9	COBRA	2	EC	0.125	lb ai/a	8	fl oz/a	7-10DA-A	B			92	ab
9	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	7-10DA-A	B				
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"WH	A	55	c	90	bc
10	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			94	ab
10	ULTRA BLAZER	2	EC	0.352	lb ai/a	22.5	fl oz/a	7-10DA-A	B			93	ab
10	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	7-10DA-A	B				
11	FLEXSTAR	1.88	EC	0.293	lb ai/a	20	fl oz/a	3-4"WH	A	97	a	98	a
11	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			99	a
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DA-A	B			98	a
11	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7-10DA-A	B				
12	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	3-4"WH	A	97	a	97	a
12	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			98	ab
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DA-A	B			97	a
12	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7-10DA-A	B				
13	ULTRA BLAZER	2	EC	0.25	lb ai/a	16	fl oz/a	3-4"WH	A	92	a	96	a
13	COC (PRIME OIL)	100	SL	0.25	% v/v	0.25	% v/v	3-4"WH	A			97	ab
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DA-A	B			97	a
13	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7-10DA-A	B				
14	FLEXSTAR GT	3.31	SL	1.55	lb ae/a	60	fl oz/a	3-4"WH	A	96	a	96	ab
14	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			93	ab
15	FLEXSTAR GT	3.31	SL	1.85	lb ae/a	71.5	fl oz/a	3-4"WH	A	96	a	95	ab
15	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"WH	A			94	ab
16	NONTREATED									0	d	0	e
LSD (P=.05)										7.7		6.3	
Replicate F										0.476		1.358	
Replicate Prob(F)										0.6257		0.2726	
Treatment F										99.995		131.019	
Treatment Prob(F)										0.0001		0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

Roundup PowerMax and Diphenyl Ether Tank Mixes.

Trial ID: 10-DSO-MONTankmix Location: De Soto, IL

Trial Comments

1. Protocol: Monsanto (30-11).
2. Ratings: CI at 0, 7, and 28 DA-B. WC at 7, and 28 DA-A and B.
3. Yield is not necessary, but appreciated.
4. Blanket PRE application of Intron (1 qt/A) to be applied to all plots 10 ft wide.
5. Blanket burndown application of glyphosate (1.12 lb ae/A) plus 2,4-D (0.475 lb ae/A) plus AMS was applied 4-13-10.
Blanket preemergence application of Gramoxone (3 pt/A) plus NIS (0.5% v/v) was applied 5-8-10.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Harvested 9-25-10, (2) 30 inch rows by 26.5 ft.